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the optional side lobe direction of the main beam is obtained.

(57) Abstract:

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PROBLEM TO BE SOLVED: To make possible restricting plural kinds of useless wave by eliminating a measure limitation.

SOLUTION: A main beam is generated by a reflection mirror 1 and a first irradiating equipment 2 so as to obtain a main beam signal, frequency-converted by a receiver 4, converted into a digital signal and inputted to an adaptive beam generating circuit 5. In the meantime, plural antenna elements are arranged in an array-shape at optional places on a reflection mirror surface so as to constitute L-number of auxiliary antennas 301-30L. A sum beam signal and a difference beam signal are generated by synthesizers 311-31L from the respective element outputs of the respective auxiliary antennas 301-30L, frequency-converted by the receiver 4, converted into the digital signals and inputted to the adaptive beam generating circuit 5 as a control channel. In the circuit, a useless wave component by the side lobe of the main beam signal is restricted based on a control channel so that the response of the control channel in

